

## **"Electro-Optic Studies of Charge-Density-Wave Conductors"**

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Abstract: Charge-Density-Wave (CDW) conductors, materials in which the CDW can be depinned by application of a small electric field, are known for the variety of novel electronic properties they display. Several years ago, we found that their infrared properties are also affected by an applied electric field as it strains the CDW. These IR changes are caused by changes in both conduction electron density and phonon frequencies, resulting in a very broad band electro-optic response. Our research has concentrated on two aspects of this response: i) using it to study the dynamics of CDW polarization, and ii) using it to search for intragap states associated with current conversion at contacts. The latter experiments are continuing at the ALS.